



Nutri-Facts

Dietary Supplements

What are Dietary Supplements?

The Dietary Supplement Health and Education Act defines dietary supplements as a product (other than tobacco) intended to supplement the diet that contains one or more of the following dietary ingredients: a vitamin, mineral, amino acid, herb or other botanical; or a dietary substance for use to supplement the diet by increasing the total dietary intake; or a concentrate, metabolite, constituent, extract, or combination of any ingredient described above; and intended for ingestion in the form of a capsule, powder, softgel, or gelcap, and not represented as a conventional food or as a sole item of a meal or the diet.

Should I take Dietary Supplements?

Active duty, reserves, family and retired military members may take dietary supplements to lose weight, build muscle and improve performance, increase energy and improve health. Purchases of dietary supplements have increased greatly due to marketing and advertising by supplement manufacturers who use consumer dollars for increased awareness and purchasing power rather than product research and good manufacturing practices. Over 1,000 new dietary supplements are added annually to the already 29,000 available.

How safe are Dietary Supplements?

1. As a consumer, you need information you can trust to help make thoughtful decisions about eating a healthful diet and using dietary supplements.
2. Many members of the U.S. military have had serious problems stemming from dehydration, seizures, disorientation, migraine headaches and even death as a result of dietary supplement use. Safety is a major concern since the Food and Drug Administration does not consider standards of practice and manufacturers can put unproven claims on packaging.
3. Recent laboratory tests of 27 types of multivitamins have again demonstrated the worrisome fact that many packages of dietary supplements on store shelves don't contain what their labels say. The tests, conducted by Consumerlabs, a research and publishing firm that performs independent testing of supplements for the industry and consumers, assigned 9 of the 27 products with a failing grade. This means they failed either to contain the labeled ingredients in the amounts described or failed related tests of disintegration and purity.

Commonly used supplements with dangerous side effects:

Ephedra/Ma Huang: This class of stimulants contains alkaloids that increase cardiac output and muscle contraction, raise blood sugar and open bronchial pathways for easier breathing. Ephedra may also suppress appetite. Claims include increased metabolism, aid in weight loss, enhanced athletic performance and alertness and improvements of asthma symptoms. A number of civilian and several active-duty deaths have been linked with ephedra use. Reported side effects include nervousness, stomach distress, irregular heartbeat, seizures, high blood pressure, stroke and death. A few of the

products containing ephedra are Metabolife , Ripped Fuel, Diet Fuel, Stacker 3, Hydroxycut , Xenadrine RFA-1, Metab-O-Lite and Yellow Jackets.

On December 30, 2003, the Food and Drug Administration announced that ephedra will be the first dietary supplement ever to be banned from public use.

Ephedra-free products: These products have increasingly become more popular due to consumer awareness over the dangers of ephedra; however, herbal mixtures of this form of dietary supplements are still questionable due to safety and health issues. There are many other forms of alkaloids besides ephedra and ma-huang that may pose harm to consumers. Examples of ephedra-free products that contain other alkaloid substances include Xenadrine, Hydroxycut without ephedra and other products containing synephrine.

Creatine: An amino acid produced in the body that increases muscle reservoirs of phosphocreatine (PC) and helps maintain levels of ATP, an immediate source of energy in the muscle. The literature does indicate that creatine improves high intensity exercises such as sprinting, one rep weight lifting, vertical jumping and repetitive contraction of muscles; however, endurance activities can be compromised due to weight gain. Side effects include GI distress, nausea, diarrhea and muscle cramping. Examples of products with creatine include EAS Betagen, Phosphagen and Synthevol and Universal Cell Pro.

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Androstenedione: A naturally occurring hormone that is converted in very small amounts to testosterone that claims to increase muscle mass and strength and decrease body fat. Side effects include estrogen level increases in men and the reduction of good cholesterol levels that protect against heart disease. Norandrostenedione, Androstene, Vitanet Ultimate, Androflex, Tribex and Ultimate Stack are a few products that contain this hormone.

Protein Supplements: These supplements come in the form of ready to drink fluids, powders and sports bars. Recommended daily intake of protein is between 0.5g/lb for healthy, sedentary individuals and as much as 0.9g/lb for athletes. Increased protein also means increased calories. If adequate intake of protein is consumed through foods, protein supplements will result in fat building rather than muscle building. Problems with kidney and liver function may also occur as a result of excess protein intake. There are numerous products on the market such as ProBlend 55, Met Rx, EAS Myoplex, Cytodyne Cytopro and Dr. Atkins Shake Mix.

Are there any guidelines for using dietary supplements?

Using product labels and the internet to make decisions about supplements is risky. The United States Pharmacopeia has created a "USP" marker that is placed on supplements which meet manufacturer standards of quality, purity and potency. Look for the "USP" United States Pharmacopoeia notation on supplement labels. This indicates good manufacturing practices and identifies products that meet specific standards.

Be wary of sensational claims. If a product seems too good to be true, there is a good chance that very little scientific proof exists for the manufacturer's claims. Discuss supplement use with your primary care provider before purchasing. Just as it is important to read food labels, reading product labels on supplements is useful as well. If you do decide to take a dietary supplement, start with a single product and take the lowest dose first, not to exceed recommended amounts. Stop taking the supplement if you feel worse or develop new symptoms. Contact your primary care provider immediately.

Is there any supplement that is recommended for maintaining health?

A multi-vitamin with minerals may be beneficial in ensuring that important nutrients are being taken daily. As an example, a multi-vitamin may contain folic acid, an important B vitamin that prevents birth defects and heart disease. When selecting a multi-vitamin, select one with no more than 100% of the recommended daily intake for vitamins and minerals. This ensures safety and avoids spending extra money on supplements that may not be worth the cost.

Where can I get more information?

- The National Institutes of Health Office of Dietary Supplements
<http://ods.od.nih.gov>
- Food and Drug Administration
<http://www.cfsan.fda.gov/~dms/supplmnt.html>
- Nutritional Ergogenic Agents
<http://www.usuhs.mil/mim/ergopam.pdf>
- Navy Environmental Health Center <http://www-nehc.med.navy.mil/hp>
- Contact the FDA for consumer warnings and general information at
<http://vm.cfsan.fda.gov/~dms/supplement.html>.
- U.S. Army Center for Health Promotion and Preventive Medicine
<http://chppm-www.apgea.army.mil>

For more information on this and other health and wellness topics, visit
Navy Knowledge Online (NKO) at <http://www.nko.navy.mil> or the
Navy Environmental Health Center (NEHC) at <http://www-nehc.med.navy.mil/hp>.